

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 July 2004 (22.07.2004)

PCT

(10) International Publication Number
WO 2004/060925 A2

(51) International Patent Classification⁷:

C08F

(72) Inventors; and

(21) International Application Number:

PCT/US2003/041459

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(22) International Filing Date:

30 December 2003 (30.12.2003)

(25) Filing Language:

English

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(26) Publication Language:

English

(30) Priority Data:

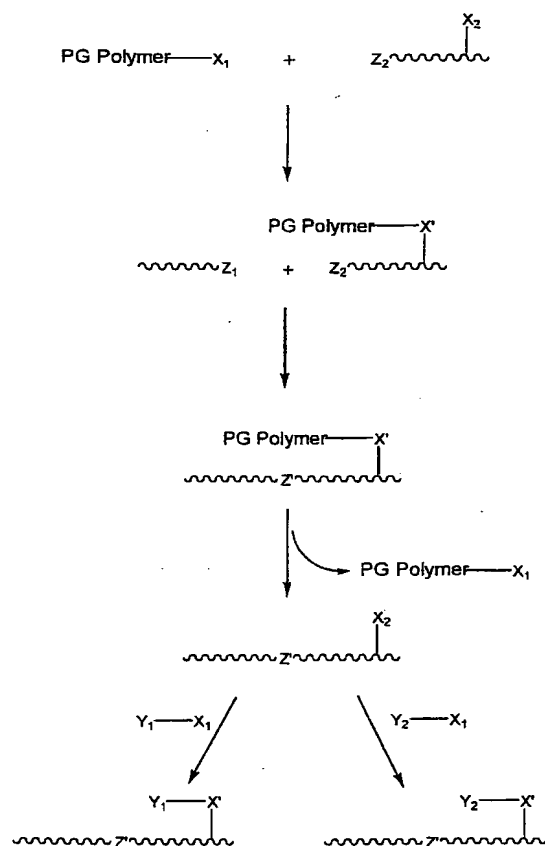
60/437,511 30 December 2002 (30.12.2002) US
60/515,609 29 October 2003 (29.10.2003) US

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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[Continued on next page]

(54) Title: MULTIPLEX POLYMER LIGATION



(57) Abstract: The invention concerns a multiplex polymer ligation method involving water-soluble polymeric protecting groups, compositions and methods of use. The method involves synthesis of a first compound bearing one or more water-soluble polymeric protecting groups followed by replacing one or more of the water-soluble protecting groups with a chemical adduct of interest. Multiple different compounds derived from the first compound can be readily prepared by splitting the first compound into first and second reaction systems, followed by replacing one or more of the water-soluble polymeric protecting groups of the first reaction system with a first chemical adduct, and replacing one or more of the water-soluble polymeric protecting groups of the second reaction system with a second chemical adduct of interest, where the first and second chemical adducts are different. Also provided are kits useful for carrying out the multiplex polymer ligation methods of the invention.